

ABSTRACT

A method and apparatus are provided for detecting a receiver over a PCI-Express bus. A receiver is detected on a PCI-Express link by adjusting a common mode voltage using a current injected into one or more transmitter output nodes and detecting whether a receiver is present based on a voltage change rate. The current can be injected, for example, by a charge pump. In various embodiments, the charge pump can be integrated with a CML transmit buffer or an H-bridge type of transmit buffer. The amplitude control circuit can compare the adjusted common mode voltage to one or more predefined voltages and maintain the adjusted common mode voltage between two predefined voltages. The amplitude control circuit provides a signal to the charge pump to control the current injected into the transmitter output nodes. The amplitude control circuit also provides a signal to an exemplary timer that measures the voltage change rate.

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